RECENT LITERATURE

Carlquist, S.: Wood anatomy of Byblidaceae. Bot. Gaz. 137: 35-38 (1976)
A detailed description of the qualitative and quantitative features on the secondary xylem of B. gigantea is presented and is found to be similar to that of Roridula, a non-carnivorous plant. B. liniflora has very little secondary xylem and so was not discussed. The author also speculates that Byblis gigantea may not be a carnivorous plant.

Casper, S.J. and Manitz, H.: Contributions to the taxonomy and chorology of the Central European Utricularia species: 2. Androsporogenesis, chromosome count and pollen morphology. Feddes Repert 86(4): 211-232 (1975) IN GERMAN
In U. vulgaris, U. australis, U. intermedia, U. ochroleuca and U. minor, the number of chromosomes is n=22. In U. australis and U. ochroleuca, n=18, 19, 23 or 24 chromosomes sometimes. The pollen grains of the central European species represent the most derived type of the genus.

Franck, D. H.: Comparative morphology and early leaf histogenesis of adult and juvenile leaves of Darlingtonia californica and their bearing on the concept of heterophylly. Bot. Gaz. 137: 20-34 (1976)
The shoot system of Darlingtonia is characterized by the adult and juvenile leaves which display different ontogenic growth patterns at the earliest stages of initiation. The pattern of venation is significantly different between the two leaf types. The adult leaves show a greater elaboration of the pinnate venation pattern at all stages of ontogeny.

Frowine, S.A.: Growing Carnivores. Light Garden 13:47-52 (1976).
A fine general article with excellent photos, cultural instructions and a list of commercial sources.

Heslop-Harrison, Y.: Enzyme secretion and digest uptake in carnivorous plants. Perspectives in Experimental Biology Vol. 2, Botany, ed. N. Sunderland. Pergamon Press, Oxford (1976).

Jensen, S.R., Nielsen, J.B. and Dahlgren, R.: Iridoid compounds, their occurrence and systematic importance in the angiosperms. Botaniska Notiser 128(1): 181-197 (1975).
Iridoid glucosides have been detected or identified for the first time in many families which included Sarraceniaceae and Roridulaceae. The authors comment on the systemic position of these families.

Juniper, B.E. and Gilchrist, A.J.: Absorption and transport of calcium in the stalked glands of Drosera capensis L. (See above reference) p. 477.
The authors used x-ray-analytical procedures to trace the pathways of transport of specific protein (casein) placed on the glands. Some of the ultrastructural features of gland and stalk cells were unique and previously unreported as it transported the proteins into the plant.

Robbins, R.J.: The nature of the stimuli causing digestive juice secretion in Dionaea muscipula Ellis (Venus' flytrap). Planta 128: 263-265 (1976).
The secretory system in Dionaea was investigated. It was found that secretion of fluid and protein are both stimulated by various nitrogenous small molecules. The author studied these secretions as a function of time.

Sahashi, N. and Ikuse, M.: Pollen morphology of Aldrovanda vesiculosa L. Journ. Japan Bot. 48(12): 374-379 (1973).
The description is essentially in agreement with that of the report given by Erdtman and Chanda with new information given on the operculum and some irregular forms of grain arrangement.

Schnell, D.E. and Krider, D.W.: Cluster analysis of the genus Sarracenia L. in the south-eastern United States. Castanea 41:165-176 (1976).
Twenty-six computer cluster analyses were performed on the data matrix derived from grading species and some infraspecies on nineteen characters, some of the latter multi-state. The resulting dendrogram is discussed from a phenetic and evolutionary standpoint. (Reprints: D.E. Schnell, Route 4, Box 275B, Statesville, NC 28677).

Swales, D.E.: An unusual habitat for Drosera rotundifolia L., its over-wintering state, and vegetative reproduction. Canad. Field Natur. 89:143-147. (1975).
D. rotundifolia was found growing in a rather dry habitat on Ile Perrot, Quebec, but soil analysis indicated the same level of infertility typical of more moist Drosera soils, and there was a dearth of competing plants with much open soil surface. There is a discussion and description of winter buds, adventitious leaf budding, and how the plant may possibly have migrated to this location. Excellent line drawings.

Williams, Stephen E.: Comparative sensory physiology of the Droseraceae--the evolution of a plant sensory system. Proc. Amer. Phil. Soc. 120, (3) (1976).
This is a publication of a talk listed previously in CPN V: 16, 1976, in which the author discusses the physiology and evolution of Aldrovanda, Drosera, Drosophyllum and Dionaea's sensory structures.

Williams, Stephen E. and Spanswick, Roger: Propagation of the neuroid action potential of the carnivorous plant Drosera. Jour. Comp. Phys.A (1976) in press.

The authors have produced evidence that propagation of electrically induced action potentials are conducted up and down the tentacle stalks by means of low resistance cytoplasmic connections between cells called plasmodesmata. These action potentials occurred at a rate of 4.3 mm/sec down the stalk after a stimulus.